

KeyJanuary: 1–42
May: 168–221February: 43–88
October: 222–286March: 89–125
November: 287–342April: 126–167
December: 343–403**Topical Index****Cross Curriculum**

- Instructional Practice
Using Inquiry
Classroom Blogging

137
49
173

Science

- Conceptions of Illness
Coherence of Teaching
Perception of Engineering
Inquiry Instrument
Mind Mapping

263
103
197
291
299

Math

- Gender Perception
Gender Difference
Reading and Writing
Perception of Discourse
Number Representation
Unit Concept
Classroom Test
Word Problem
Students Belief
Emerging Discipline
Low-Achieving Students
Algebra Problem Solving
Functional Model

149
113
8
58
238
20
251
184
326
355
362
380
278

High School

- Observation of Student

28

Pre-Service

- Service Learning
Elementary Math Knowledge
Functional Model
Manipulatives Using
Pre-service Teachers' Reaction

94
120
228
313
345

Author Index

Issam Abi-El-Mona	298	Xiaobao Li	4
Fouad Adb-El-Khalick	298	Yeping Li	4, 90, 169
Tufan Adiguzel	127, 225	Jen Lyons	197
Dani Ben-Zvi	355	Robyn Macbride	173
Michael J. Bosse	8	Christine Marroquin	279
Brian T. Boyd	251	Dianne S. McCarthy	334
Susan M. Butler	71	Bryan Moseley	238
Barbara Boschmans	345	Christine Moseley	49
Erdine Cakiroglu	113	Henry W. Neale, Jr.	326
Robert M. Capraro	80	Barbara O'Donnell	313
Glenda Carter	71	Todd Oberg	345
Xi Chen	90	Yukari Okamoto	238
Michelle Cook	71	Irene U. Osisioma	389
Jon D. Davis	380	Charlotte A. Otto	278
Thomas C. DeFranco	58	Serkan Ozel	80
Francis Eberle	103	John C. Park	71
Kellah Edens	184	Diana Piccolo	46
N. Kathryn Essex	169	Ann G. Ponniah	169
Susan A. Everett	278	Ellen Potter	184
Johna Faulconer	8	Laurel Puchner	313
Kathleen Fick	313	David K. Pugalee	326
John Ford	362	Sarah Ramsey	49
Joan Garfield	355	Melissa J. Rua	263
Hope Gerson	28	John A. Ross	362
Peter L. Glidden	130	Amélie G. Schinck	326
Nicholas Gorgievski	58	Lori A. Smolleck	291
Tracy Goodson-Espy	289	Hortensia Soto-Johnson	345
April Hoffmeister	345	Paola Sztajn	20
Douglas Huffman	137	Janet (Hagemeier) Tassell	169
Mary Ann Huntley	380	Ann Taylor	313
Michele Iiams	345	Kelli Thomas	137
Mine Isiksal	113	Stephen Thompson	197
M. Gail Jones	263	Mary P. Truxaw	58
mutindi mumbua kiluva-ndunda	389	Meta Van Sickle	389
Lisa Kirtman	94	Kimberley J. Vannest	127
Peter Kloosterman	169	Eric N. Wiebe	71
Frances Lawrenz	137	YunMei Xu	362
Hyung Sook Lee	20	Zeynep Ebrar Yetkiner	80
April Lynn Luehmann	173	Edgar P. Yoder	291
Gail R. Luera	278	Elaine Young	279

Title Index

Page	Title
8	<i>Learning and Assessing Mathematics through Reading and Writing</i>
20	<i>Focusing on Units to Support Prospective Elementary Teachers' Understanding of Division in Fractional Contexts</i>
28	<i>David's Understanding of Functions and Periodicity</i>
49	<i>Elementary Teachers' Progressive Understanding of Inquiry through the Process of Reflection</i>
58	<i>Measuring K-8 Teachers' Perceptions of Discourse Use in Their Mathematics Classes</i>
71	<i>Middle Grade Students' Interpretations of Contour Maps</i>
94	<i>Pre-Service Teachers and Mathematics: The Impact of Service-Learning on Teacher Preparation</i>
103	<i>Teaching and Coherent Science: An Investigation of Teachers' Beliefs about and Practice of Teaching Science Correctly</i>
113	<i>Gender Differences Regarding Mathematics Achievement: The Case of Turkish Middle School Students</i>
130	<i>Prospective Elementary Teachers' Understanding of Order of Operations</i>
137	<i>Science and Mathematics Instruction in Reform-Based Teacher Preparation Program</i>
169	<i>Perceptions of Mathematics and Gender</i>
173	<i>Capitalizing on Emerging Technologies: A Case Study of Classroom Blogging</i>
184	<i>How Students "Unpack" the Structure of a Word Problem: Graphic Representations and Problem Solving</i>
197	<i>Engineers in the Classroom: Their Influence on African-American Students' Perceptions of Engineering</i>
228	<i>Using a Functional Model to Develop a Mathematical Formula</i>
238	<i>Identifying Fourth Graders' Understanding of Rational Number Representations: A Mixed Methods Approach</i>
251	<i>Effects of State Tests on Classroom Test Items in Mathematics</i>
263	<i>Conceptual Representations of Flu and Microbial Illness Held by Students, Teachers, and Medical Professionals</i>
291	<i>Further Development and Validation of the Teaching Science as Inquiry (TSI) Instrument</i>
298	<i>The Influence of Mind Mapping on Eighth Graders' Science Achievement</i>
313	<i>Teacher Learning Mathematics Manipulatives: A Collective Case Study about Teacher Use of Manipulatives in Elementary and Middle School Mathematics Lessons</i>
326	<i>Using Metaphors to Unpack Student Beliefs about Mathematics</i>
345	<i>Promoting Pre-service Elementary Teachers' Awareness of Learning and Teaching Mathematics Conceptually through KTEM</i>
355	<i>Introducing the Emerging Discipline of Statistics Education</i>
362	<i>The Effects of a Teacher In-Service on Low-Achieving Grade 7 and 8 Mathematics Students</i>
380	<i>High-School Students' Approaches to Solving Algebra Problems that are Posed Symbolically: Results from an Interview Study</i>

Regular Features

Editorials: Gerald Kulm

- 2 *Teachers' Mathematics Knowledge*
224 *Transition to Online Manuscript Submission and Review*

Guest Editorials

- 44 *The Veritable Quandary of Teacher Content Knowledge*, Carole Basile and Doris Kimbrough
289 *Running Against the Wind*, Tracy Goodson-Espy

Problems: Ted Eisenberg

Page	Problem Number
41	Problems 4996–5001
88	Problems 5002–5006
124	Problems 5008–5013
166	Problems 5014–5019
214	Problems 5020–5023
286	Problems 5029–5031
342	Problems 5032–5037
402	Problems 5038–5043

Research in Brief

Page	Title
4	<i>Research on Students' Misconceptions to Improve Teaching and Learning in School Mathematics and Science</i> , Xiaobao Li and Yeping Li
46	<i>Views of Content and Pedagogical Knowledges for Teaching Mathematics</i> , Diana Piccolo
90	<i>Language Proficiency and Mathematics Learning</i> , Xi Chen and Yeping Li
127	<i>Web-Based Formative Assessment as Evidence-Based Practice in Science Instruction</i> , Tufan Adiguzel and Kimberley J. Vannest
169	<i>Mathematical Preparation of Elementary School Teachers: Generalists versus Content Specialists</i> , Yeping Li
225	<i>Advantages of Using Handheld Computers Against Other Methodologies for Data Collection</i> , Tufan Adiguzel

Research in the Classroom

Page	Title
279	<i>Mathematics on the Playground</i> , Elaine Young and Christine Marroquin
334	<i>Communication in Mathematics: Preparing Preservice Teachers to Include Writing in Mathematics Teaching and Learning</i> , Dianne S. McCarthy
389	<i>Behind the Masks: Identifying Students' Competencies for Learning Mathematics and Science in Urban Settings</i> , Irene U. Osisioma, mutindi mumbua kiluva-ndunda, Meta Van Sickle

Book Reviews: S. Wali Abdi, Section Editor

Page	Title
39	<i>The Prime Number Theorem</i> , reviewed by Medhat H. Rahim; <i>Creating a Classroom of Young Scientists (Second Edition)</i> , reviewed by John Eichinger
86	<i>Understanding Mathematics and Science Matters</i> , reviewed by Juliana Utley; <i>The Discoveries: Great Breakthroughs in 20th Century Science</i> , reviewed by Robert J. Whitaker
121	<i>How the Other Half Thinks: Adventures in Mathematical Reasoning</i> , reviewed by Daniel J. Schneck; <i>The Chemical Elements</i> , reviewed by Dorothy L. Gabel

- 163 *Experimental Researches in Electricity*, reviewed by John Whitmer; *Topics in Graph Automorphisms and Reconstruction*, reviewed by Medhat H. Rahim; *Basic Concepts of Mathematics and Logic*, reviewed by Daniel J. Schneck
- 212 *Science Safety in the Community College*, reviewed by Lloyd H. Barrow; *Basic Concepts of Mathematics and Logic*, reviewed by Daniel J. Schneck
- 284 *Fantasy Baseball and Mathematics: A Resource Guide for Teachers and Parents*, reviewed by Carl Miller
- 341 *Uno's Garden*, reviewed by John Eichinger
- 401 *Awesome Experiments in Electricity and Magnetism; Weather Mania; and How Bright is Your Brain*; all reviewed by Michael A. DiSpezio

Short Report

- | Page | Title |
|------|--|
| 80 | <i>Technology in K-12 Mathematics Classrooms</i> , Serkan Ozel, Zeynep Ebrar Yetkiner, and Robert M. Capraro |